5236

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... Office No. 5236

LOCALITY

State S. E. Alaska

General locality Revillagigedo

Locality Channel

1932

CHIEF OF PARTY

G. C. Jones

LIBRARY & ARCHIVES

DATE .....

B-1870-1 (1)++

5236

5236

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, *Director*

State: S. E. Alaska

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic

Sheet No. 2. 5236

LOCALITY

Revillagigedo Channel

S. E. Alaska.

Black Rk., to Black I., + Vicinity

1932.

CHIEF OF PARTY

G. C. Jones.

U. S. GOVERNMENT PRINTING OFFICE: 1930

5236

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5236

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 2

REGISTER NO. 5236

State Alaska

General locality Revillagigedo Channel

Locality Black Rk., to Black I., & Vicinity

Scale 20,000 / 10,000 Date of survey July. 5, - Oct., 12, 1932

Vessel Explorer

Chief of Party G. C. Jones

Surveyed by W. Weidlich

Protracted by

Soundings penciled by

Soundings in fathoms ~~feet~~

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by J. Walker

Verified by J. Walker

Instructions dated March 24, 1932, 192

Remarks:

GPO

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2,

REVILLAGIGEDO CHANNEL,

S. E. ALASKA,

1932.

G. C. JONES, CHIEF OF PARTY.

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2,

REVILLAGIGEDO CHANNEL - S. E. ALASKA.

AUTHORITY:

The hydrography on this sheet was executed under instructions dated March 24, 1932.

SCALE:

1:20,000 and insert of Mary Island Anchorage 1:10,000. Soundings are in fathoms.

LIMITS:

The inshore hydrography covers the East shore of Revillagigedo Channel from triangulation station "NEW" to about half a mile South of triangulation station "BLACK", and the East shore of Mary Island from triangulation station "GIANT" to triangulation station "CLAY". Sheet No. 2 connects with Sheet No. 1.

METHODS:

The approved methods of the service were used throughout.

A considerable amount of developing was done, numerous rocks located and the depths of others reduced to much less.

Launch work was performed with exeellent fixes and lines run generally on ranges. This explains the lack of compass headings in the sounding volumes.

The launch "DELTA" was used for all the work and the letter days are shown in red. The few soundings taken from the ship at the close of the season are indicated by capital letters.

A ten pound hand lead was used in depths of less than fifteen fathoms and in greater depths a steam sounding machine with an eighteen pound lead and stranded wire.

The lines are spaced three hundred meters apart at the North limit of the sheet, but near the shores 150 meters and in the coves, anchorages and channels, 100 meters and less. At the entrance to Boco de Quadra the lines were run 300 meters apart as this area is wire dragged.

The sounding lines run in easterly and westerly direction with the exception of Mary Island anchorage, Bullhead and Kah Shakes Coves.

In shallow waters the shoal and kelp patches were developed with two hand leads and on critical spots an additional lead was used by the officer in charge. Although hundreds of soundings were taken, only the least depths were recorded and plotted.

Although the launch "DELTA" may be considered old and antiquated she keeps up with launches of more recent design and, the best feature of all, she is seaworthy in every respect. Her sounding machine works very efficiently and takes in three hundred fathoms of wire in less than one minute and a half.

CONTROL:

Triangulation and topography furnished the necessary control.

TIDES:

An automatic portable tide gauge was in operation from the beginning of the season until July 13th, in Alava Bay, while for the remainder of the work all reducers were taken from the gauge maintained in inner Kah Shakes Cove.

A few soundings were taken from the ship at the close of the season north of triangulation station "CLAY", and the reducers were taken from the gauge in operation at Morse Cove.

KELP:

All rocks and reefs are marked by thick kelp, and eel grass was found at the mouth of the smaller streams and near the sand and mud flats.

CURRENTS:

No current observations were taken in this locality. The flood runs in a northerly direction and is strongest near the shore of the mainland. It is greatly influenced by southerly winds.

The ebb which runs in the opposite direction is greatly influenced by winds and rain. During the rainy season the ebb is strongest and at that time the water is discolored making it impossible to see bottom even in very shallow water.

While working at the entrance to Boca de Quadra a strong westerly set was experienced at all times.

BOTTOM:

The bottom is very irregular especially near the reefs and wooded islets.

The bottom characteristic in general is rocky and sandy with occasional mud in deeper water.

The shoreline is rocky and abrupt in many places.

RESULTS:

This survey revealed numerous shoals and other obstructions not charted before. Depths of old charts were greatly reduced but on several occasions this party failed to obtain similar soundings as shown on chart No. 8075, between White Reef and Snail Rock, near or in wire dragged areas. See dangers and obstructions, Paragraphs 16, 17, and 18.

The low water line in Mary Island Anchorage does not check with the one shown on Chart No. 8068. A survey was not necessary to reveal the facts, it is plainly visible to any keen observer.

In view of the fact that this area was surveyed at low and minus tides it was impossible to approach the shore any closer without undue hazard to the launch and loss of time.

DANGERS AND OBSTRUCTIONS:

East shore of Revillagigedo Channel.

The most important are enumerated below, beginning at the north end of the sheet.

φ 55°07.6 λ 131°04.5

1. A kelp patch with a least depth found of 3 feet at M.L.L.W., lies about 295 meters, 20° from station "HUS". (Pos. 63 e.) Bottom is visible and rocky.

2. A kelp patch with a least depth found of 1½ fathoms at M.L.L.W., lies about 280 meters 55° from station "HUS". (Pos. 59 and 60 e.) Bottom is rocky and visible.

3. A kelp patch with a least depth found of 1-5/6 fathoms at M.L.L.W., lies about 305 meters 113° from station "HUS". Bottom is visible and rocky. (Pos. 56 e.)

4. A large kelp patch with a least depth found of two fathoms at M.L.L.W., lies about 820 meters 313° from station "AN". This area is

End of Fathtrap

well developed, bottom visible and rocky. (Pos. 50 e.) Chart No. 8075 shows a depth of 2-1/4 fathoms.

5. A kelp patch of considerable extent lies about 200 meters Northwest of station "AN". Least depth found is one foot at M.L.L.W., about 245 meters 297½° from station "AN". This rock lies at the West end of the kelp patch, but was not itself covered with any kelp.

6. Foul area extends for about 275 meters south of a rock which bares about 8 feet at M.L.L.W. Rock is 650 meters 120° from station "AN".

7. The area between a group of islets north of Slate Islands Light (Station MAK) is more or less foul and marked by thick kelp.

8. The rock as shown on chart 8102 and 8075, Northeast of Slate Island Light does not exist and the symbol of a rock bare at low tides should be removed. This area was examined at minus tide with following results: Least depth found 1-2/6 fathoms at M.L.L.W., was located 630 meters 65° from station "SLATE". Bottom is visible, and area covered with thick kelp. Numerous soundings were taken only least depths recorded and plotted. (Pos. 99 e.)

Left note by C.&.G.S. in Review.

9. A kelp patch with a least depth found of 2 fathoms at M.L.L.W., lies about 890 meters 10 ° from station "SHAK". Bottom is visible. Area was examined on different working days and all efforts to reduce depth as shown on chart No. 8075 were without success. (Pos. 27 t.)

This rock breaks during heavy Southeast gales and heavy swell.

10. A kelp patch with a least depth found of 1-4/6 fathoms at M.L.L.W., lies about 1210 meters 22½° from triangulation "SHAK". Bottom is visible.(Pos. 9 m.) This rock breaks during Southeast gales and heavy swell.

11. A kelp patch with a least depth found of 3 feet at M.L.L.W., lies about 270 meters 210½° from station "WIL", at the South entrance to Bullhead Cove. (Pos. 37 t.)

12. The narrow channel to Inner Kah Shakes Cove was examined on several occasions from a skiff at low tides. The center of the channel was found to be free of rocks. Results of this examination were not recorded, fixes were not taken as the weather was bad, visibility poor, and the surrounding islets shut off all the signals.

A ledge extends for about 120 meters in a Southeasterly direction from the easterly group of rocky islets and position 24 t. marks the extreme end with a depth of one foot at M.L.L.W.

See page 1 of Report of 1933, Add'l work

The controlling depth as determined by this survey is 13 feet in the center of the channel, about 5 feet more than noted in the "Alaska Coast Pilot, No. 1" page 94, paragraph 3.

The channel was used on numerous occasions and at all stages of the tide by the chartered launch, drawing 6 feet.

Three regular sounding lines were run through the channel.

13. A kelp patch with a least depth found of 1-1/2 fathoms at M.L.L.W., lies about 1200 meters 167° from triangulation station "SHAK". (Pos. 81, 82, and 85 y.) Bottom is visible.

14. A bank with a least depth found of 12 fathoms at M.L.L.W., lies about 700 meters 248° from triangulation station "SHAK". Bottom is sandy. (Pos. 72, 73 w. and 20 w.)

15. A large kelp patch with a least depth found of 1½ fathoms at M.L.L.W., lies about 760 meters 109° from triangulation station "SNAIL". Bottom is visible. Chart No. 8075 shows a depth of 2¾ fathoms. (Pos. 80 w.)

16. The 5¼ fathom spot as shown on Chart 8075, about 1/2 mile North of Snail Rock, at the edge of wire dragged area could not be located by the party. Least depth found, 8-3/4 fathoms at M.L.L.W., lies about ~~870~~ 980 meters 338° from triangulation "SNAIL". *D on H3789

Checked in W.D. records. a.L.S

17. A shoal with a least depth found of 8 fathoms at M.L.L.W., lies about 1460 meters 26° from triangulation "SNAIL". Bottom is rocky and sandy. This shoal is at the edge of wire dragged area and chart No. 8075 shows a depth of 7 fathoms. (Pos. 34 w.)

18. A shoal with a least depth found of 7¾ fathoms at M.L.L.W., lies about 2090 meters 11° from triangulation station "SNAIL". Bottom is rocky. This shoal lies in wire dragged area and chart No. 8075 shows a depth of 7 fathoms.

There are a few more shoal soundings North of last position, but no attention was paid to them as they lie in wire dragged area.

East Shore of Mary Island.

19. A rock which bares at 1½ feet at M.L.L.W., marks the extreme north end of foul area and lies about 170 meters 83° from station "BAN". (Pos. 54 1.) This position does not check within 75 meters with that shown on Chart 8068.

Mary I. Anch.

See notes by A.L.S. attached to Review.

20. A bank with a least depth found of 14 fathoms at M.L.L.W., lies about 525 meters 160° from triangulation station "ROSEN". (Pos. 90, and 91 j and 14 k.) Rocky bottom. ϕ55°14.4 λ131°10.7

21. A shoal with a least depth found of 11 fathoms at M.L.L.W. lies about 650 meters 188° from triangulation station "ROSEN". (Pos 96 j.) Rocky bottom.

22. A kelp patch with a least depth found of 3 feet at M.L.L.W. lies about 300 meters 43° from station "BAR". (Pos. 153 j.) Bottom is visible.

23. A kelp patch with a least depth found of 4 feet at M.L.L.W. lies about 180 meters 96° from station "BAR". (Pos. 145 & 146 j.) Bottom is visible.

24. A 7-1/2 fathom spot lies about 390 meters 116½° from station "BAR". (Pos. 141 j.) This shoal is not developed.

WEATHER:

Heavy continuous rain and strong Southerly winds and gales delayed the work considerably and working grounds had to be changed frequently in order to make the best of the situation.

ANCHORAGES:

Inner Kah Shakes Cove and Bullhead Cove, offer the best shelter during high winds as they are land locked.

Kah Shakes Cove, as mentioned in Alaska Coast Pilot No. 1, page 94, offers a good anchorage under ordinary conditions. Quite different however during Southeast gales. Heavy swell piles in and the "EXPLORER" rolled considerably making it extremely hazardous to hoist small boats. An anchorage may be selected according to the depths desired.

Inner Kah Shakes Cove offers excellent shelter in five to eight fathoms of water, muddy bottom. Care should be taken not to anchor South of the piling on account of several rocks.

Bullhead Cove (local name) offers excellent anchorage to small vessels in vicinity of the piling in about nine fathoms. The South entrance is recommended, but care must be exercised to clear the kelp marked rock with three feet over it at M.L.L.W.

The North entrance may be used at high tides, it has a controlling depth of three feet at M.L.L.W. Bottom is sandy throughout. The head of the cove bares at low tides and is used for storing floating fish traps.

Temporary anchorage may be had North of the Slate Islands near a group of piling, the remains of a fish trap. During strong Southerly winds vessels find protection at low tide only, as with the rising tide heavy seas pile in.

Mary Island Anchorage offers good shelter from heavy seas, and anchorage may be had just before the red sector of Mary Island Light disappears in 14 to 20 fathoms of water.

Smaller vessels may find anchorage East of Point Winslow in 8 to 10 fathoms of water.

Respectfully submitted,

W. Weidlich,
Mate, C. & G. Survey.

APPROVED AND FORWARDED:

G. C. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

STATISTICS

HYDROGRAPHIC SHEET NO. 2

DATE	VOL.	DAY	BOAT	STAT. MILES	POS.	SOUNDINGS HAND	SOUNDINGS MACH	AREA	MILES TO & FROM WORK
July 5	1	a	DELTA	14.6	65	23	135		6.0
6	1	b	"	21.7	127	171	198		3.5
7	1	c	"	19.3	156	510	129		8.2
8	2	d	"	20.8	129	345	187		5.6
9	2	e	"	9.1	100	228	42		7.1
11	2	f	"	4.6	25	28	53		7.8
13	2	g	"	7.9	45	86	91		8.0
14	2	h	"	5.9	43	49	52		1.5
15	3	j	"	19.3	158	237	212		6.2
16	3	k	"	9.4	76	95	119		5.4
20	3	l	"	15.0	139	290	168		4.4
22	4	m	"	11.3	102	203	96		7.0
23	4	n	"	13.5	48	---	132		15.3
25	4	p	"	23.5	161	389	192		6.3
26	5	q	"	12.8	69	30	160		6.2
27	5	r	"	19.4	125	285	188		4.8
28	5 & 6	s	"	21.3	155	500	149		2.1
Aug. 2	6	t	"	5.0	53	182	22		7.0
3	6	u	"	16.1	109	306	149		3.1
5	6	v	"	18.4	110	213	196		2.4
6	7	w	"	8.8	82	190	---		8.9
9	7	x	"	24.9	126	288	246		1.8
10	7	y	"	15.7	85	210	100		4.1
Oct. 12	8	A	EXPLORER	1.6	24	---	24		0.0
TOTALS:				339.9	2312	4858	3041		132.7
							4858		
							7899		

RQ4

March 29, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 5236

Locality **Revillagigedo Channel, Southeast Alaska**

Chief of Party: **G. C. Jones in 1932**
Plane of reference is **mean lower low water, reading**
10.4 ft. on tide staff at **Alava Bay**
24.5 ft. below B. M. **1**
5.6 ft. on tide staff at Kah Shakes Cove
15.8 ft. below B.M. 1
2.4 ft. on tide staff at Morse Cove
14.5 ft. below B.M. 1
Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Height of mean higher high water above plane of reference is 15 feet.

Paul C. Whitney

~~Acting~~ Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5236

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	2312
Number of positions checked	313 = ~~7.4%~~ 13.5% of total
Number of positions revised	21 = 7% of those checked
Number of soundings recorded	7899
Number of soundings revised	244
Number of signals erroneously plotted or transferred	Several slightly off but not enough to change boat positions.

Date: May 16, 1933

Cartographer: J T Walker

Section of Field Records

Report on H5236
Chief of Party, G.C. Jones
Protracted by W. Weidlich
Verified and Inked by J.T. Walker

Surveyed in 1932
Surveyed by W. Weidlich
Soundings plotted by
W. Weidlich

The sounding records were neatly kept and were legible. In some instances no mention was made when passing close to a rock or other obstruction so that there was some doubt as to the existence of rocks shown on the topo sheets.

Less than the usual amount of protracting was done on this sheet. In general, only those positions were checked which looked erroneous, located critical soundings, or could not otherwise be found. Thirteen and one-half percent of the positions were checked and of these, 7% were found to be wrong.

The soundings were carefully penciled in according to time and the correct fractions were used. Few errors were found. There were few crossings on the sheet as most of the lines run east and west. at Lat. 55°-02¼' Long. 131°-03½ the crossing is not very good but nothing could be found wrong.

When received this sheet had been started by Mr. Jones of Field Records. He had partly checked

the triangulation which the writer finished checking. a tracing was made by the writer of the topo signals from T 4727 and they were checked with H 5236. Some of the signals were found misspelled and a considerable number were found slightly out of position. The maximum error found was about 15 meters and some of these were revised but it is believed that this will make but slight difference in the boat positions. It was subsequently found that no ✓ gross errors were introduced in the boat positions.

Along the eastern side of the sheet from Kah Shakes Point south, it was necessary to transfer rocks and shoreline from both T 3539 and T 4727. all the rocks and shoreline shown on T 4727 in ink were transferred to H 5236. ✓ Rocks and shoreline not shown on T 4727 in ink were transferred from T 3539 unless as otherwise noted. In the descriptive report for T 4727 at the top of page 5 the field officer says, "Some new rocks were located and the old ones rechecked. There is no way of telling if all the old rocks were rechecked and if they were rechecked were they shown on T 4727 in ink? No mention of the fish traps and piles shown on T 3539 was made and they were not

mentioned in any of the sounding records. It is assumed that they no longer exist and so were not inked in on H 5236.

at the entrance to Kah Shakes Cove Lat. 55°-02½' Long 130°-59½', four rocks awash are shown on T 3539 which are not shown on T 4727. If these rocks were transferred to H 5236 it would close off the entrance to the cove and would not show the channel with a controlling depth of 2⅙ fathoms in mid channel between ⊙ IP and ⊙ Eek. The four rocks were therefore not transferred. See page 4, #12 of the descriptive report. Inside the cove at Lat. 55°-02'+ 925 m. Long. 130°-59'+ 310 m a rock awash is shown on T 3539 and not on T 4727. No mention is made of it in the sounding records for H 5236 and it is not shown on the boat sheet. It was <u>not</u> transferred to H 5236 by the writer but probably should be.*

The shoreline was transferred by the field party to the smooth sheet in a very careless and inaccurate manner but no changes were made unless it conflicted with some other feature.

* T 4727 shows this as the end of a shore reef but the sdg party was here at a -2 foot tide and took sextant fixes to locate water line. It is not likely that they would have missed an offlying rock at the time. The hyd. sheet should govern. RPL

Two recent sheets (H 5244 and H 5263) join H 5236 but neither has been verified and so, no overlap from them was applied

Soundings from WD 3789 and WD 3790 were applied and are shown in green.

Respectfully submitted

J. F. Walker

5/17/33

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5236
Black Rock to Black Island & Vicinity, Revillagigedo Channel, Alaska.
Surveyed July - October 1932
Instructions dated March 24, 1932 (Explorer)

Chief of Party - G. C. Jones.
Surveyed by - W. Weidlich.
Protracted and soundings plotted by - W. Weidlich.
Verified and inked by - J. T. Walker.

1. The records conform to the requirements of the Hydrographic Manual.

2. The plan and extent of development conform to the regulations and satisfy the specific instructions. There is one indication of a shoal ($7\frac{1}{2}$ fathoms) in lat. 55°03.'9 long. 131°11.'2 that should have had further development.

3. Soundings are generally consistent. Depths at crossing of lines are in good agreement except in lat. 55°02$\frac{1}{4}$' long. 131°03$\frac{1}{2}$' where line 26 - 28y crosses 84 - 88v with a difference of 1 to 2 fathoms. Distant signals were used on v day and it is possible the observers took tangents or approximated the position of the outer signals.

There is a discrepancy in the low water line on the western side of Kah Shakes Cove. T. 4727 shows a reef extending 100 meters off the island near signal Lot to a point shown on the 1915 survey (T3539) by a rock awash symbol. The sounding launch was aground in the vicinity for about 4 hours during a minus 2 foot tide. During that time they located the water line by sextant fixes. It is not likely that they would have missed an outlying rock. The soundings show a depth of 2 fathoms 100 meters off shore. The hyd. sheet (H. 5236) is believed to be the correct representation. (See par. 4 of attached notes by A. L. S.).

4. Depth curves can be drawn satisfactorily.

5. Junction with contemporary survey sheets H. 5244 and H. 5263 will be reported when those sheets have been completed.

6. Comparison with H. 3789 *and H3790* (wire drag in 1915) show no discrepancies except the rock awash in Kah Shakes Cove noted in paragraph 3. The entrance channel shows 6 feet depth on the former survey and 13 feet on the 1932 survey but this is due to the more careful development, the 1915 survey being in the nature of a reconnaissance to make the Cove available as a base of operation for the wire drag. Depths on shoals determined by the wire drag party in 1915 have been added to H. 5236 in green.

Depths in Mary I. Anch. (H. 3782) are in fair agreement.

The 1892 survey (H. 2142, H. 2149) agrees very well in the deeper areas. The older surveys are not in sufficient detail inshore to warrant a close comparison.

On chart 8068 the shoreline at Giant Point is out of position and there are several minor differences in details alongshore. All features on Chart 8075 are adequately covered by the 1932 survey.

No. 5236.

7. The field plotting of the hydrography was good. The verifier noted some inaccuracy in transfer of signals and details of shoreline; spelling of names of signals on hyd. and topo. sheets are not in agreement, examples, Dev for Dov, Blau for Blue, etc. Corrections have been made where the records might have beenmisinterpreted.

8. Recommendation.- This sheet (H. 5236) should supersede the earlier surveys (1892) for charting the areas covered by the 1932 survey. Mary I. Anch. (Chart 6068) should be corrected to conform to the 1932 survey. No further surveys are deemed necessary at this time. The shoal ($7\frac{1}{2}$ fathoms) noted in paragraph 2, though not developed probably has no depth dangerous to vessels likely to navigate in that vicinity.

9. Reviewed by R. J. Christman - May 27, 1933.

Note by A. L. Shalowitz.

1. The charted rock mentioned in par. 8 of the descriptive report to the northeast of Slate Island was investigated and found to originate with W. D. 3790 (surveyed in 1915, scale 1-10,000). As best as could be determined the shoreline and rocks on this sheet were enlarged from the contemporary survey T-3539 (scale 1-20,000), and it appears that in enlarging, the kelp patch shown on T-3539 was interpreted as containing a rock awash and it was so indicated on W. D. 3790. A more correct representation would have been a sunken rock symbol. The present survey with 8 feet over the rock seems an adequate representation and the rock awash symbol should be expunged from the charts.

2. The charted rock noted in par. 19 of the Descriptive Report in Mary I. Anchorage is a rock additional to the one found on the present survey and not misplaced as the descriptive report would seem to indicate. The charted rock was determined on two surveys (H. 1619b surveyed in 1883 and H. 3782 surveyed in 1915). The 1883 survey shows a reef existing here and extending from the charted rock awash to a sunken rock about 45 meters to the northward. This sunken rock is approximately in the position of the rock awash (bare $1\frac{1}{2}$ feet at M.L.L.W.) found onthe present survey. The rock awash from the 1915 survey has been transferred in red to the present survey.

3. The rock awash shown on the charts in about the middle of the bight at the head of Kah Shakes Cove is out of position, probably incorrectly plotted from the old survey T-3539 since the latter agrees with the location shown on the present survey.

4. The rock and reef on the west side of Kah Shakes Cove mentioned in par. 3 of the review has been further investigated and it is found that the rock is referred to in the descriptive report for T-3539 as "a rock covered about 2 feet at ordinary low water". It would seem then that notwithstanding the fact that the hydrographic party was operating in the vicinity at a minus 2 foot tide, they could still have missed the rock. The whole matter has been referred to the field party (see letter attached) for further clarification and will be finally disposed of when information is received. For the present, however, the representation on the hydrographic sheet including the rock awash should be considered as correct.

Existence of this rock confirmed by Add'l Work of 1933.

No. 5236.

5. Attention is called to the fact that the survey fails to comply with the intent of the Specific Instructions (par. 18) in so far as the scale on which Kah Shakes Cove was surveyed. The hydrography in the narrow entrance to the cove has been replotted in the office on a 1-10,000 scale in order to clarify the detail. The desirability of surveying the cove on a larger scale should have been apparent to the Chief of Party.

6. Note to Compiler.

All the pertinent information, from T-3539 (survey of 1915) in the vicinity of the Entrance to Kah Shakes Cove has been transferred and adjusted to the hydrographic sheet (see Insert, H-5236) and this sheet only should be used for charting such information.

See Inspection note Adwork this sheet. A.L.S.

Examined and approved:

L. O. Colbert,
Chief, Field Records Section.

Chief, Chart Division.

Chief, Field Work Section.

Chief, H. & T. Division.

81-DRM

June 28, 1933.

Memorandum to Chief, Section of Field Work.

Subject: Survey of Kah Shakes Cove, Southeast Alaska.

There are attached photostats, on double scale, of the topographic survey No. 4727 and hydrographic survey No. 5236 of Kah Shakes Cove from field sheets of the party on the Ship EXPLORER in 1932.

Referring to the area encircled in yellow, it will be noted that the reef shown on the topographic survey was crossed by soundings of 9 to 12 feet on the hydrographic survey. Examination of topographic survey No. 3539, surveyed in 1914, shows a rock awash at extreme low tide in the position shown in red on the hydrographic sheet, which position occurs at the eastern point of the reef symbol shown on the topographic survey.

It is suggested that instructions be issued to the Commanding Officer of the EXPLORER to investigate and clear up the apparent discrepancies between these two surveys. The sounding lines are plotted exactly as recorded. It has been noted that a change of one of the signals at the end of one of the lines would place the end of that line at the edge of the reef as shown on the topographic sheet.

On the opposite side of the narrow entrance there will be found the symbols for two rocks awash. One of these is transferred from the topographic survey of the same date; the second one is transferred from topographic survey No. 3539. The question has been raised whether there are two rocks at this location, or whether some slight difference in the surveying has caused a slight displacement on one or the other of the same rock.

L. O. Colbert.
Chief, Section of Field Records

1115-Cons
Wat 4460

5236 (Add'l Wk)

5236 (Add'l Wk)

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R.S.Patton..., *Director*

State: Alaska

DESCRIPTIVE REPORT

~~Topographic~~ *Hydrographic* } *Sheet No.* 5236 (Add'l Wk.)

LOCALITY 5236

Revillagigedo Channel

Entrance to Kah Shakes Cove

1933

CHIEF OF PARTY

Jack Senior

U. S. GOVERNMENT PRINTING OFFICE: 1931

JACK SENIOR, CHIEF OF PARTY, C. & G. S.

Form 537
11—5812

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 5236 (Add'l Wk.)

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. .....

REGISTER NO. 5236 (Add'l Wk)

State Alaska

General locality Revillagigedo Channel

Locality Entrance to Kah Shakes Cove

Scale 10,000 Date of survey Aug. 5, 10, 1933, 192

Vessel Explorer

Chief of Party Jack Senior

Surveyed by H. E. Finnegan

Protracted by

Soundings penciled by

Soundings in ~~fathoms~~ feet

Plane of reference

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated July 3, 1933, 192

Remarks: Additional work to be plotted on original sheet

G P O

REPORT ON

INVESTIGATION OF DISCREPANCIES IN SURVEY SHEETS

KAH SHAKES COVE, S. E. ALASKA,

AUGUST 12, 1933.

INSTRUCTIONS:

The Director's letter of July 3, 1933 (reference 22-LE, 1995 EX-4) ordered an investigation of the discrepancies in the survey sheets T.P. No. 3539 (1914) and T.P. No. 4727 (1932), Kah Shakes Cove.

Results of the investigation, made during the early part of this month are recorded in a sounding volume. Attention is called to the fact that all elevations and depths are recorded and reduced in feet. This report is accompanied by a tracing on which the results are plotted.

PARAGRAPHS #2 and #3 of the Director's Letter:

The rock mentioned in paragraph number two does exist. A position, obtained on the rock while it was bare at a minus tide, agrees with the location as shown on topographic sheet No. 3539 (1914). This rock is covered 2.6 feet at M.L.L.W., and it is not connected with a reef extending offshore, as shown on topographic sheet No. 4727, 1932. The offshore limit of the reef, of which a position was obtained, is seventy meters distant from the rock. There is deep water between the rock and the end of the reef as shown on hydrographic sheet No. 5236 (1933). Sufficient positions and notes, to show the relation between the rock, the reef and the soundings, were made in the sounding record.

PARAGRAPH #4 of the Director's Letter:

The two rocks in question do exist as noted by the two different surveys. Positions and notes for each of the rocks are recorded in the sounding volume. These rocks are a part of a general rocky ledge, which extends about 150 meters in a southeasterly direction from the high water line, and which limits the north side of the narrow channel entering Kah Shakes Cove. See TP 12 of Field Party's Report of Original Survey

In addition to checking the two rocks which were questioned, positions and notes were obtained on two more high points of the general ledge. These positions, in the sounding records, are numbers 1a and 2a. Sunken rock symbols should be charted at these points. Between each of the high points of the ledge, there are depths of 1 to 3 feet at M.L.L.W. Position 1a marks the end of the ledge.

ADDITIONAL INFORMATION:

Sunken rock in Kah Shakes Cove Anchorage. While en route to the tide gauge, after completion of the above investigation, a sunken rock was noted in the eastern part of the bay. Positions and soundings were taken and recorded in the sounding record.

The rock is covered 6.5 feet at M.L.L.W., and is located 176 meters, 249° (true) from signal "WET", in Latitude 55°02' (926 meters), Longitude 130°58' (983 meters).

Respectfully submitted,

Henry E. Finnegan,
H. & G. Engineer,
U.S.C. & G.S.S. EXPLORER.

APPROVED AND FORWARDED:

Jack Senior,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

SECTION OF FIELD RECORDS
Verification Report of H. 5236, Additional Work.
Kah Shakes Cove, Revillagigedo Channel, Alaska.
Surveyed in 1933.

Chief of Party - Jack Senior.
Surveyed by - Jack Senior.
Soundings protracted, plotted and verified by - Harold W. Murray.

1. The Instructions for the additional work executed in this area are contained in the Director's letter of July 3, 1933, embodying discrepancies noted in the review of the original survey of 1932 (H. 5236).

2. Method of Surveying.

The work was executed during a tide range of from 1 to 3 feet above and about 1 foot below the plane of MLLW. With a single exception, 3-point fixes were obtained while the surveyor actually stood on the points in question.

3. The additional work obtained has been plotted in red on the 1-10,000 insert of the original survey of 1932 by the writer and verified by replotting and comparison with tracing submitted by the field party which is attached to the descriptive report.

4. Results of Survey.

a. In lat. 55°02'.30" plus 220m., long. 130°59' plus 357m.; the rock awash shown on T. 4727 was confirmed and found to bare 8 ft. at MLLW (Pos.1c).

b. The three rocks awash at extreme low tide about 40m. southeast of the rock mentioned above are high points of a reef which at pos. 2c, extends inshore. (Consult Descriptive Report of the 1932 survey, par. 12 and of the 1933 survey, page 1). The confirmed rock originally transferred in blue from T. 3539 was removed and a more accurate position, obtained in this survey, was substituted in red.

c. In lat. 55°02'30" plus 160m., long. 130°59' plus 389m.; a rock awash at extreme low tide (pos. 1a) was obtained.

d. The rock formerly shown in blue from T. 3539 in lat. 55°02'30", long. 130°59' plus 355m.; was removed and a more accurate location (pos. 1b) substituted in red. (See par. 4 in original review by A. L. S.).

The soundings obtained at pos. 2b (2 4/6 fm.) and pos. 3b (2 1/6 fm.) just west of this rock confirm the soundings obtained in the original survey of 1932 and therefore conclusively disprove the existence of a bare rocky ledge extending to the shore as was shown on T. 4727. Since the toe of this supposed ledge coincides with the confirmed offshore rock, the sketching of the ledge on T. 4727 was erroneous. In view of the foregoing items, the ledge shown on T. 4727 was removed from the sheet and a rock awash plotted at the outer end of the reef coinciding with the location on H. 5236 (2d. wk.).

e. In lat. 55°02'30", long. 130°58'30" plus 450m.; the surveyor, while en route to the tide gauge located an important uncharted sunken rock with a least depth of 1 fathom at MLLW. The rock is surrounded by depths of from 5 to 6½ fathoms.

Submitted by Harold W. Murray.

Inspection of Hydrographic Survey No. 5236.
(Additional Work)

The plotting and verification of the additional work on H. 5236 was done under my immediate supervision. The statements in the verifiers report (which is submitted as a part of the final report on this work) are concurred in.

The use of the rock awash symbol for rocks covered at ordinary LLW but which are awash or bare at a minus tide, is preferable to the sunken rock symbol which in the opinion of the writer should be reserved for rocks that are never exposed at any stage of the tide, ordinary or minus, and the depth over which is more or less uncertain. This procedure was followed on this sheet and it is recommended that it be adopted as standard practice. The legend "awash at extreme low tides" or "at minus tides" would convey all the information necessary for navigation.

In connection with this survey attention should be called to the danger inherent in disregarding previously located rocks on the strength of a later examination unless the later examination negatives every possible hypothesis of the existence of the rock. A case in point is the rock verified on this survey in lat. 55°02'.30" long. 130°59' - 355m. This rock was originally located on T. 3539 (1914) as "a rock covered about 2 feet at ordinary low water". The survey party in 1932 (H. 5236), although working in close proximity to the rock during a minus 2 foot tide failed to make mention of it and on its face appeared as though the rock did not exist. The rock, however, was verified by the 1933 examination and found to cover 2.6 feet at M.L.L.W. which explains why the 1932 hydrographic party failed to see it.

The removal of the ledge from the 1932 topographic sheet (T. 4727), mentioned in par. 4, d, of the verifiers report is proper, since that topographic sheet has not yet been applied to the charts.

Sheet Inspected by - A. L. Shalowitz.

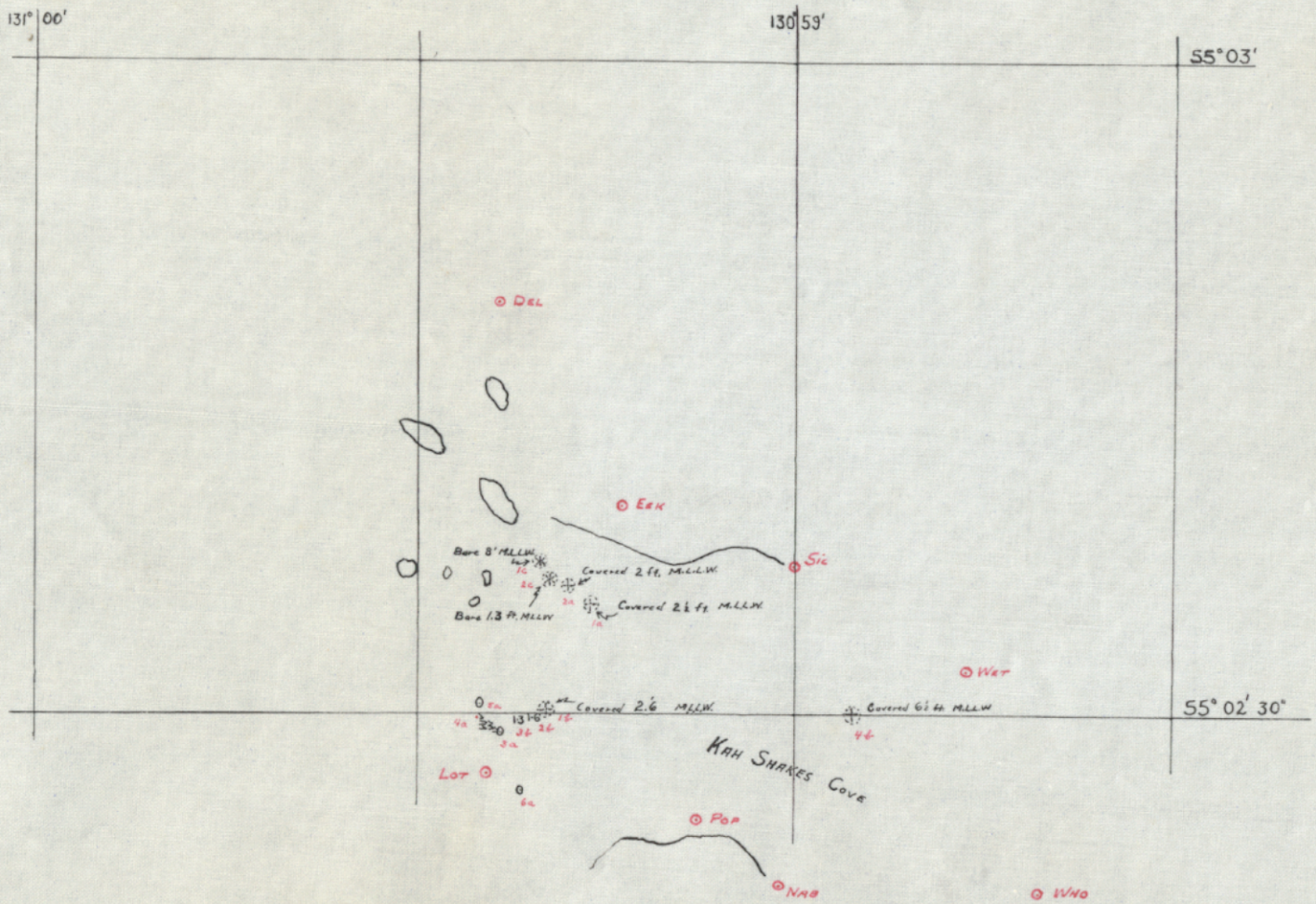
L. O. Colbert,
Chief, Field Records Section.

T. S. Borden
Chief, Field Work Section.

Examined and approved:

L. O. Colbert
Chief, Division of Charts.

G. Rude
Chief, Division of H. & T.



Boat Sheet
Scale 1:10,000

NOTE:- All depths and elevations plotted in feet.

H-5236 (Add'l. Wk.)

Applied to drawing (compilation) of Chart No 8075 S. B. M. Sept. 1934

" " " Chart 8102 S. B. M. Sept. 1934

" " " " 8002 S. B. M. Sept. 1934